AMENDMENTS TO THE SPECIFICATION

I. *Please replace the paragraph beginning at page 2, line 18 with the following amended paragraph.*

The device includes separate light sources for the respective wavelengths but uses the same photoreceptor, such as a photodiode, in terms of miniaturization of optical pickup elements or cost reduction. In this photoreceptor, the temperature characteristic of its sensitivity ~~changes depending on~~ is different for each wavelength.

II. *Please replace the paragraph beginning at page 2, line 24 with the following amended paragraph.*

For a general method of compensating the temperature characteristic, there has been known a method of providing ~~resistances~~ different resistors having different temperature characteristics to a photoreceptive amplifier circuit used for a laser power monitor. This arrangement is aimed at controlling the temperature characteristic of the sensitivity of the photoreceptive amplifier circuit so as to cancel the temperature characteristic of the photoreceptor. Then, upon recording and/or reproduction of optical disks, changes of the light intensity of the laser beam is constantly detected by a photoreceptor for a laser power monitor, and the photoreceptor then supplies output according to the result of detection, as a feedback to a light emitter of laser diode. With this manner, the light intensity of the laser beam can be kept in the optimal level.

III. *Please replace the paragraph beginning at page 3, line 14 with the following amended paragraph.*

However, this method cannot perform proper detection of laser beam intensity for the foregoing photoreceptor operating at different wavelengths and ~~changing~~ its temperature characteristic is different for different ~~according to the~~ wavelength, and the failure of detection may cause error particularly upon recording.

IV. *Please replace the paragraph beginning at page 3, line 20 with the following amended paragraph.*

~~Here, as other~~ As another reference ~~of the~~ directed to a method of monitoring laser beam, Japanese Laid-Open Patent Application Tokukai 2001-23218 (published on January 21, 2001) discloses a technique for a laser beam whose wavelength changes depending on the temperature of light emitter, in which the laser light intensity is monitored for compensating temperature characteristic of the light emitter so that the laser beam intensity can be kept in the optimum level. Likewise, Japanese Laid-Open Patent Application Tokukai 2001-52368 (published on February 23, 2001) discloses a technique in which the laser light intensity is monitored by a front monitor when the light intensity of laser beam is changed for switching writing and reading, thereby properly monitoring the light intensity of laser beam.

V. *Please replace the paragraph beginning at page 4, line 10 with the following amended paragraph.*

However, these conventional techniques ~~are~~ do not ~~helpful to~~ compensate the temperature characteristic, which changes depending on the wavelength, of the photoreceptor.

VI. *Please replace the paragraph beginning at page 4, line 15 with the following amended paragraph.*

The present invention is made in view of the foregoing conventional problems, and an object is to provide a photoreceptive amplifier circuit for compensating temperature characteristic of the photoreceptor ~~of the sensitivity~~, ~~even~~ when the temperature characteristic changes depending on the wavelength. The present invention also provides an optical pickup element including such a photoreceptive amplifier circuit.

VII. *Please replace the paragraph beginning at page 5, line 11 with the following amended paragraph.*

Accordingly, the photoreceptive amplifier circuit has a such a structure that the feedback resistor of the former-stage amplifier and at least a part of the resistors for determining sensitivity of the latter-stage amplifier are made of different resistive elements having different temperature characteristics, and also, the feedback resistors or amplifiers are selectively used in accordance with the type of wavelength of the optical signal. Such a photoreceptive amplifier circuit may be realized, for example, with a photoreceptive amplifier circuit for amplifying and outputting a signal from a photoreceptor on which optical signals of plural types of wavelength, such as a wavelength of 780nm for a CD-R/RW ~~dick~~ disk, or a wavelength of 650nm for DVD±R/RW disk, are incident, by providing the same number of feedback resistors (gain resistance) as that of types of wavelength in the former-stage amplifier to which the signal from the photoreceptor is supplied, and also providing the same number of amplifiers made up of resistors for determining sensitivity (such as input resistor or feedback resistors) as that of types of wavelength.

IX. *Please replace the paragraph beginning at page 6, line 6 with the following amended paragraph.*

Therefore, by using resistive elements with appropriate temperature characteristics for the target wavelength to constitute the feedback resistor or the resistors for determining sensitivity, it is possible to cancel the temperature characteristic of the photoreceptor by the temperature characteristic of the sensitivity of the photoreceptive amplifier circuit, ~~even~~ when the temperature characteristic changes depending on the wavelength.

X. *Please replace the paragraph beginning at page 6, line 14 with the following amended paragraph.*

Further, an optical pickup element according to the present invention includes the foregoing photoreceptive amplifier circuit. Therefore, it is possible to cancel the temperature characteristic of the photoreceptor by the temperature characteristic of the sensitivity of the photoreceptive amplifier circuit, ~~even~~ when the temperature characteristic changes depending on the wavelength, thus securely realizing an optical pickup element free from influence of the temperature characteristics of sensitivity.

XI. *Please replace the paragraph beginning at page 12, line 8 with the following amended paragraph.*

Here, assuming that Rf31 = Rf32 = Rf3, Rf41 = Rf42= Rf4, Rs31 = Rs32 = Rs3, Rs41 = Rs42 = Rs4, a sensitivity S [V/W, where V is Voltage and W is Watts] of the photoreceptive amplifier circuit is given by the following formula,

$$S = \eta \times Rf1 \times \frac{Rf3(4)}{Rs3(4)}$$

where a conversion efficiency of the photodiode is expressed as η [A/W, where A is Amps and W is Watts]. However, it should be noted that the subscription 3(4) is used only for respective outputs from the differential amplifier A3 and A4.

XII. *Please replace the paragraph beginning at page 13, line 6 with the following amended paragraph.*

Accordingly, the temperature coefficient of the sensitivity S is given by the following formula.

(temperature coefficient of S) [ppm/°C] = (temperature coefficient of η) + (temperature coefficient of Rf1) + (temperature coefficient of Rf3(4)) - (temperature coefficient of Rs3(4))

Temperature coefficient is in units of parts per million (ppm) per °C.

XII. *Please replace first instance of "∂R" with -- ∂S -- in the formula beginning at page 24, line 9.*

$$\frac{\partial S}{\partial T}\Big/S=\frac{\partial\eta/\partial T}{\eta}+\frac{\partial Rf11/\partial T}{Rf11}+\frac{R32(42)}{R31(41)+R32(42)}\times\left(\frac{\partial R32(42)/\partial T}{R32(42)}-\frac{\partial R31(41)/\partial T}{R31(41)}\right)$$

XIV. *Please replace the first instance of "∂R" with -- ∂S -- in the formula beginning at page 33, line 16.*

$$\frac{\partial S}{\partial T}\Big/S=\frac{\partial\eta/\partial T}{\eta}+\left(\frac{\partial Rf11/\partial T}{Rf11}\ or\ \frac{\partial Rf12/\partial T}{Rf12}\right)+\frac{\partial Rf5/\partial T}{Rf5}-\frac{\partial Rs5/\partial T}{Rs5}$$

XV. *Please replace the paragraph beginning at page 14, line 8 with the following amended paragraph.*

Accordingly, the feedback resistor Rf1 is formed from a diffused resistor with a temperature coefficient of 500[ppm/°C], and the resistors Rf3 and Rs3 are formed from diffused resistors with the temperature coefficients of 500[ppm/°C] and 1200[ppm/°C], for example. With this arrangement, it is possible to provide a temperature characteristic = 0 for the sensitivity of the output from the differential amplifier A3 ~~A4~~ for a DVD-type disk with a wavelength of 650nm, as denoted by the formula below.